

## Declaration and Power of Attorney For Patent Application

## 特許出願宣言書及び委任状

## Japanese Language Declaration

## 日本語宣言書

下記の氏名の発明者として、私は以下の通り宣言します。

As a below named inventor, I hereby declare that

私の住所、私書箱、国籍は下記の私の氏名の後に記載された通りです。

My residence, post office address and citizenship are as stated next to my name.

下記の名称の発明に関して請求範囲に記載され、特許出願している発明内容について、私が最初かつ唯一の発明者（下記の氏名が一つの場合）もしくは最初かつ共同発明者であると（下記の名称が複数の場合）信じています。

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

FLUID DISTRIBUTOR, BURNER APPARATUS,  
GAS TURBINE ENGINE AND CO-GENERATION  
SYSTEM

上記発明の明細書（下記の欄でX印がついていない場合は、本書に添付）は、

the specification of which is attached hereto unless the following box is checked:

☐ 月 日に提出され、米国出願番号または特許協定条約  
国際出願番号を \_\_\_\_\_ とし、  
(該当する場合) \_\_\_\_\_ に訂正されました。☒ was filed on December 11, 2000  
as United States Application Number or  
PCT International Application Number  
PCT/JP00/08760 and was amended on  
\_\_\_\_\_ (if applicable).私は、特許請求範囲を含む上記訂正後の明細書を検討し、  
内容を理解していることをここに表明します。I hereby state that I have reviewed and understand the contents of  
the above identified specification, including the claims, as  
amended by any amendment referred to above.私は、連邦規則法典第37編第1条56項に定義されると  
おり、特許資格の有無について重要な情報を開示する義務が  
あることを認めます。I acknowledge the duty to disclose information which is material to  
patentability as defined in Title 37, Code of Federal Regulations,  
Section 1.56.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Japanese Language Declaration  
(日本語宣言書)

私は、米国法典第35篇119条(a)-(d)項又は365条(b)項に基づき下記の、米国以外の国の少なくとも一ヶ国を指定している特許協力条約365(a)項に基づく国際出願、又は外国での特許出願もしくは発明者証の出願についての外国優先権をここに主張するとともに、優先権を主張している、本出願の前に出願された特許または発明者証の外国出願を以下に、枠内をマークすることで、示しています。

Prior Foreign Application(s)

外国での先行出願 See #1

(Number) (番号)	(Country) (国名)
(Number) (番号)	(Country) (国名)

私は、第35篇米国法典119条(e)項に基づいて下記の米国特許出願規定に記載された権利をここに主張いたします。

(Application No.) (出願番号)	(Filing Date) (出願日)
-----------------------------	------------------------

私は、下記の米国法典第35篇120条に基づいて下記の米国特許出願に記載された権利、又は米国を指定している特許協力条約365条(c)に基づき権利をここに主張します。また、本出願の各請求範囲の内容が米国法典第35篇112条第1項又は特許協力条約で規定された方法で先行する米国特許出願に開示されていない限り、その先行米出願書提出日より本出願書の日本国内または特許協力条約国際提出日よりの期間中に入手された、連邦規則法典第37篇1条56項で定義された特許資格の有無に関する重要な情報について開示義務があることを認識しています。

(Application No.) (出願番号)	(Filing Date) (出願日)
(Application No.) (出願番号)	(Filing Date) (出願日)

私は、私自身の知識に基づいて本宣言書中で私が行なう説明が真実であり、かつ私の入手した情報と私の信じていること、さらに故意になされた虚偽の表明及びそれと同等の行為は米国法典第18篇第1001条に基づき、罰金または拘禁、もしくはその両方により処罰されること、そしてそのような故意による虚偽の声明を行なえば、出願した、又は既に許可された特許の有効性が失われることを認識し、よってここに上記のごとく宣誓を致します。

I hereby claim foreign priority under Title 35, United States Code, Section 119 (a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Priority Not Claimed

優先権主張なし

(Day/Month/Year Filed) (出願年月日)	<input type="checkbox"/>
(Day/Month/Year Filed) (出願年月日)	<input type="checkbox"/>

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below.

(Application No.) (出願番号)	(Filing Date) (出願日)
-----------------------------	------------------------

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s), or 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of application.

(Status: Patented, Pending, Abandoned) (現況: 特許許可済、係属中、放棄済)
(Status: Patented, Pending, Abandoned) (現況: 特許許可済、係属中、放棄済)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

\*1

Prior Foreign Application(s)

外国での先行出願

Priority Not Claimed

優先権主張なし

Pat. Appln. No.	JP11-356251	Japan	December 15, 1999	<input type="checkbox"/>
Pat. Appln. No.	JP11-356252	Japan	December 15, 1999	<input type="checkbox"/>
Pat. Appln. No.	JP11-356253	Japan	December 15, 1999	<input type="checkbox"/>
Pat. Appln. No.	JP2000-41173	Japan	February 18, 2000	<input type="checkbox"/>
Pat. Appln. No.	JP2000-148187	Japan	May 19, 2000	<input type="checkbox"/>
(Number)		(Country)	(Day/Month/Year Filed)	
(番号)		(国名)	(出願年月日)	

VJ

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## Japanese Language Declaration (日本語宣言書)

英二文: 私は下記の発明者として、本出願に関する一切の  
手続を米特許商標局に対して遂行する弁理士または代理人  
として、下記の者を指名いたします。(弁理士、または代理  
人の氏名及び登録番号を明記のこと)

POWER OF ATTORNEY: As a named inventor, I hereby appoint  
the following attorney(s) and/or agent(s) to prosecute this  
application and transact all business in the Patent and Trademark  
Office connected therewith (list name and registration number)

William H. Logsdon	22,132	Barbara E. Johnson	31,198	Lester N. Fortney	38,141
Russell D. Orkin	25,363	Paul M. Reznick	33,059	Randall A. Notzen	36,882
David C. Hanson	23,024	John W. McIlvaine	34,219	Jewsse A. Hirshman	40,016
Frederick B. Ziesenheim	19,438	Michael I. Shamos	30,424	James G. Porcelli	33,757
Richard L. Byrne	28,498	Blynn L. Shideler	35,034	Kent E. Baldauf, Jr.	36,082
Kent E. Baldauf	25,826	Julie W. Meder	36,216		

類送付先

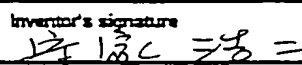
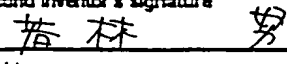
Send Correspondence to:

Russell D. Orkin,  
700 Koppers Building, 436 Seventh Avenue, Pttsburgh PA 15219-1818

直接電話連絡先:  
(名前及び電話番号)

Direct Telephone calls to: (name and telephone number)

Russell D. Orkin (412) 471-8815

唯一または第一発明者名		Full name of sole or first inventor	
		Koji MORIYA	
発明者の署名	日付	Inventor's signature	Date
			June 7, 2002
住所		Residence	
		Chuo-ku, Osaka, Japan	
国籍		Citizenship	
		Japanese	
私書箱		Post Office Address	
		c/o OSAKA GAS CO., LTD. 1-2, Hiranomachi 4-chome, Chuo-ku, Osaka, Japan	
第二共同発明者		Full name of second joint inventor, if any	
		Tsutomu WAKABAYASHI	
第二共同発明者	日付	Second inventor's signature	Date
			June 7, 2002
住所		Residence	
		Chuo-ku, Osaka, Japan	
国籍		Citizenship	
		Japanese	
私書箱		Post Office Address	
		c/o OSAKA GAS CO., LTD. 1-2, Hiranomachi 4-chome, Chuo-ku, Osaka, Japan	

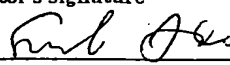
(第三以降の共同発明者についても同様に記載し、署名をす  
ること)

(Supply similar information and signature for third and subsequent  
joint inventors.)

## (日本語宣誓書) Japanese Language Declaration

第三共同発明者	Full name of 3rd joint inventor, if any Takahiro SAKO	
発明者の署名	日付	Third inventor's signature Date 佐古 孝弘 June 7, 2002
住所	Residence Chuo-ku, Osaka, Japan	
国籍	Citizenship Japanese	
私書箱	Post Office Address c/o OSAKA GAS CO., LTD.	
	1-2, Hiranomachi 4-chome, Chuo-ku, Osaka, Japan	
第四共同発明者	Full name of 4th joint inventor, if any Yuji NAKAMURA	
発明者の署名	日付	4th inventor's signature Date 中村 裕司 June 7, 2002
住所	Residence Chuo-ku, Osaka, Japan	
国籍	Citizenship Japanese	
私書箱	Post Office Address c/o OSAKA GAS CO., LTD.	
	1-2, Hiranomachi 4-chome, Chuo-ku, Osaka, Japan	
第五共同発明者	Full name of 5th joint inventor, if any Shonosuke KOGA	
発明者の署名	日付	5th inventor's signature Date 古賀 祥之助 June 7, 2002
住所	Residence Chuo-ku, Osaka, Japan	
国籍	Citizenship Japanese	
私書箱	Post Office Address c/o OSAKA GAS CO., LTD.	
	1-2, Hiranomachi 4-chome, Chuo-ku, Osaka, Japan	
第六共同発明者	Full name of 6th joint inventor, if any Masamichi IPPOMATSU	
発明者の署名	日付	6th inventor's signature Date M. Ippomatsu June 7, 2002
住所	Residence Chuo-ku, Osaka, Japan	
国籍	Citizenship Japanese	
私書箱	Post Office Address c/o OSAKA GAS CO., LTD.	
	1-2, Hiranomachi 4-chome, Chuo-ku, Osaka, Japan	

(日本語宣誓書) Japanese Language Declaration

第七共同発明者	Full name of 7th joint inventor, if any Seiichi ITO	
発明者の署名	7th inventor's signature 	Date June 7, 2002
住所	Residence Chuo-ku, Osaka, Japan	
国籍	Citizenship Japanese	
私書箱	Post Office Address c/o OSAKA GAS CO., LTD.	
	1-2, Hiranomachi 4-chome, CHuo-ku, Osaka, Japan	
第八共同発明者	Full name of 8th joint inventor, if any	
発明者の署名	8th inventor's signature	Date
住所	Residence	
国籍	Citizenship	
私書箱	Post Office Address	
第九共同発明者	Full name of 9th joint inventor, if any	
発明者の署名	9th inventor's signature	Date
住所	Residence	
国籍	Citizenship	
私書箱	Post Office Address	

PCT-89  
U.S.  
(2)

PTC/S2/105 (8-36)

Approved for use through 9/30/98. CMB 0651-0002  
Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid CMB control number.

## Declaration and Power of Attorney For Patent Application

特許出願宣言書及び委任状

### Japanese Language Declaration

#### 日本語宣言書

下記の三名の発明者として、私は以下の通り宣言します。

As a below named inventor, I hereby declare that:

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GAS TURBINE ENGINE AND CO-GENERATION  
SYSTEM

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the specification of which is attached hereto unless the following box is checked:

☐ 月 日に提出され、米国出願番号または特許協定条約  
国際出願番号を \_\_\_\_\_ とし、  
(該当する場合) \_\_\_\_\_ に訂正されました。

☒ was filed on December 11, 2000  
as United States Application Number or  
PCT International Application Number  
PCT/JP00/08760 and was amended on  
\_\_\_\_\_ (if applicable).

私は、特許請求範囲を含む上記訂正後の明細書を検討し、  
内容を理解していることをここに表明します。

I hereby state that I have reviewed and understand the contents of  
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amended by any amendment referred to above.

私は、送附規則法典第37編第1条56項に定義されると  
おり、特許文書の有様について重要な情報を開示する義務が  
あることを認めます。

I acknowledge the duty to disclose information which is material to  
patentability as defined in Title 37, Code of Federal Regulations,  
Section 1.56.

15②

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### Prior Foreign Application(s)

外国での先行出願

See \*1

(Number) (番号)	(Country) (国名)
(Number) (番号)	(Country) (国名)

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(Application No.) (出願番号)	(Filing Date) (出願日)

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(Application No.) (出願番号)	(Filing Date) (出願日)
(Application No.) (出願番号)	(Filing Date) (出願日)

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Priority Not Claimed

優先権主張なし

(Day/Month/Year Filed) (出願年月日)	<input type="checkbox"/>
(Day/Month/Year Filed) (出願年月日)	<input type="checkbox"/>

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below.

(Application No.) (出願番号)	(Filing Date) (出願日)
(Application No.) (出願番号)	(Filing Date) (出願日)

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(Status: Patented, Pending, Abandoned) (状況: 特許許可済、係属中、放棄済)
(Status: Patented, Pending, Abandoned) (状況: 特許許可済、係属中、放棄済)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Prior Foreign Application(s)

外国での先行出願

Priority Not Claimed

優先権主張なし

Pat. Appln. No.	JP11-356251	Japan	December 15, 1999	<input type="checkbox"/>
Pat. Appln. No.	JP11-356252	Japan	December 15, 1999	<input type="checkbox"/>
Pat. Appln. No.	JP11-356253	Japan	December 15, 1999	<input type="checkbox"/>
Pat. Appln. No.	JP2000-41173	Japan	February 18, 2000	<input type="checkbox"/>
Pat. Appln. No.	JP2000-148187	Japan	May 19, 2000	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)		
(番号)	(国名)	(出願年月日)		

USG

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# Japanese Language Declaration (日本語宣言書)

受任状: 私は下記の発明者として、本出願に関する一切の手続きを米特許商標局に対して遂行する弁理士または代理人として、下記の者を指名いたします。(弁理士、または代理人の三名及び登録番号を明記のこと)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith (list name and registration number)

William H. Logsdon	22,132	Barbara E. Johnson	31,198	Lester N. Fortney	38,141
Russell D. Orkin	25,363	Paul M. Reznick	33,059	Randall A. Notzen	36,882
David C. Hanson	23,024	John W. McIlvaine	34,219	Jewsse A. Hirshman	40,016
Frederick B. Ziesenheim	19,438	Michael I. Shamos	30,424	James G. Porcelli	33,757
Richard L. Byrne	28,498	Blynn L. Shideler	35,034	Kent E. Baldauf, Jr.	36,082
Kent E. Baldauf	25,826	Julie W. Meder	36,216		

書類送付先

Send Correspondence to:

Russell D. Orkin,  
700 Koppers Building, 436 Seventh Avenue, Pttsburgh PA 15219-1818

直接電話連絡先:  
(名前及び電話番号)

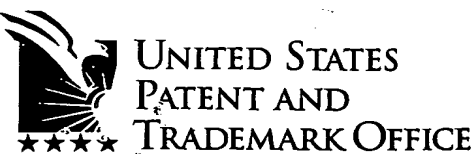
Direct Telephone calls to: (name and telephone number)

Russell D. Orkin (412) 471-8815

唯一または第一発明者名		Full name of sole or first inventor	
		Kazuo SUZUKI	
発明者の署名	日付	Inventor's signature	Date
		鈴木 和雄	June 7, 2002
住所		Residence	
		Chofu-shi, Tokyo, Japan	
国籍		Citizenship	
		Japanese	
私書箱		Post Office Address	
		c/o National Aerospace Laboratory, Science and Technology Agency 44-1, Jindaiji Higashimachi 7-chome, Chofu-shi, Tokyo, Japan	
第二共同発明者		Full name of second joint inventor, if any	
		Kazuo SHIMODAIRA	
第二共同発明者	日付	Second inventor's signature	Date
		下平 一雄	June 7, 2002
住所		Residence	
		Chofu-shi, Tokyo, Japan	
国籍		Citizenship	
		Japanese	
私書箱		Post Office Address	
		c/o National Aerospace Laboratory, Science and Technology Agency 44-1, Jindaiji Higashimachi 7-chome, Chofu-shi, Tokyo, Japan	

(第三以降の共同発明者についても同様に記載し、署名をすること)

(Supply similar information and signature for third and subsequent joint inventors.)



WEBB, ZIESENHAGEN, LOGSDON  
ORKIN, HANSON & CO

JAN - 6 2003

DECEMBER 31, 2002

ORKIN & HANSON, P.C.  
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PITTSBURGH, PA 15219-1818

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Under Secretary of Commerce For Intellectual Property and  
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UNITED STATES PATENT AND TRADEMARK OFFICE  
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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 06/14/2002

REEL/FRAME: 013320/0614  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

MORIYA, KOJI

DOC DATE: 06/07/2002

ASSIGNOR:

WAKABAYASHI, TSUTOMU

DOC DATE: 06/07/2002

ASSIGNOR:

SAKO, TAKAHIRO

DOC DATE: 06/07/2002

ASSIGNOR:

NAKAMURA, YUJI

DOC DATE: 06/07/2002

ASSIGNOR:

KOGA, SHONOSUKE

DOC DATE: 06/07/2002

ASSIGNOR:

IPPOMMATSU, MASAMICHI

DOC DATE: 06/07/2002

ASSIGNOR:

ITO, SEIICHI

DOC DATE: 06/07/2002

ASSIGNEE:

OSAKA GAS CO., LTD.  
1-2, HIRANOMACHI 4-CHOME, CHUO-KU  
OSAKA, JAPAN

SERIAL NUMBER: 10149887  
PATENT NUMBER:

FILING DATE: 06/14/2002  
ISSUE DATE:

ANTIONE ROYALL, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

A 1 581-40

10/149887

PCT/PTO JUN 14 2002

FORM PTO-1595

(Rev. 6-93)

RECORD

12-20-2002

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

OMB No. 0651-0011 (exp. 4/94)



Tab settings -0 -0 -0 -0

102322896

6/14/02

To the Commissioner for Patents:  
Please record the attached original documents or copy thereof.

<p>1. Name of conveying party(ies):</p> <p>Koji MORIYA, Tsutomu WAKABAYASHI, Takahiro SAKO, Yuji NAKAMURA, Shonosuke KOGA, Masamichi IPPOMMATSU and Seiichi ITO</p> <p>Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>3. Nature of conveyance:</p> <p><input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other _____</p> <p>Execution Date: <u>June 7, 2002</u></p>	<p>2. Name and address of receiving party(ies)</p> <p>Name: <u>OSAKA GAS CO., LTD.</u></p> <p>Internal Address: _____</p> <p>Street Address: <u>1-2, Hiranomachi 4-chome,</u> <u>Chuo-ku, Osaka, Japan</u></p> <p>City: _____</p> <p>State: _____ ZIP: _____</p> <p>Additional name(s) &amp; address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
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<p>4. Application number(s) or patent number(s):</p> <p>If this document is being filed together with a new application, the execution date of the application is: <u>June 7, 2002</u></p>	
<p>A. Patent Application No. (s)</p> <p>(06/21/2002 SHAJARRD 00000038 10149887 04 FC:581 40.00 OP)</p> <p>Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>B. Patent No. (s)</p>

<p>5. Name and address of party to whom correspondence concerning document should be mailed:</p> <p>Name: <u>Russell D. Orkin</u></p> <p>Internal Address: <u>Webb Ziesenheim Logsdon</u> <u>Orkin &amp; Hanson, P.C.</u></p> <p>Street Address: <u>700 Koppers Building</u> <u>436 Seventh Avenue</u></p> <p>City: <u>Pittsburgh</u> State: <u>PA</u> ZIP: <u>15219-1818</u></p>	<p>6. Total number of applications and patents involved: <span style="border: 1px solid black; padding: 0 5px;">1</span></p> <p>7. Total fee (37 CFR 3.41) ..... \$ <u>40.00</u></p> <p><input checked="" type="checkbox"/> Enclosed with filing fee <input type="checkbox"/> Authorized to be charged to deposit account</p> <p>8. Deposit account number: _____</p> <p>(Attach triplicate copy of this page if paying by deposit account)</p>
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<p>9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.</p>		
<p><u>Blynn L. Shideler</u> Name of Person Signing Reg. No. 35,034</p>	<p><u>[Signature]</u> Signature</p>	<p><u>June 14, 2002</u> Date</p>
<p>Total number of pages including cover sheet, attachments and document <span style="border: 1px solid black; padding: 0 5px;">4</span></p>		

Mail documents to be recorded with required cover sheet information to:  
Assistant Commissioner for Patents, Box Assignments  
Washington, D.C. 20231

## ASSIGNMENT

WHEREAS, MORIYA KOJI, TSUTOMU WAKABAYASHI, TAKAHIRO SAKO, YUJI NAKAMURA,  
SHONOSUKE KOGA, MASAMICHI IPPOMATSU and SEIICHI ITO

whose post office addresses appear below (hereinafter (collectively) referred to as ASSIGNOR), has (have) invented certain new and useful improvements in an

FLUID DISTRIBUTOR, BURNER APPARATUS, GAS TURBINE ENGINE AND  
(TITLE OF INVENTION)  
CO-GENERATION SYSTEM

(hereinafter referred to as THE INVENTION) for which an application for United States Letters Patent was filed on \_\_\_\_\_, Serial Number \_\_\_\_\_;

WHEREAS, OSAKA GAS CO., LTD.

whose post office address is 1-2, Hiranomachi 4-chome, Chuo-ku, Osaka, Japan

(and)


whose post office address is \_\_\_\_\_  
(hereinafter (collectively) referred to as ASSIGNEE), is desirous of acquiring the entire right, title and interest in and to the same in the United States and throughout the world;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, we, ASSIGNOR, by these presents do sell, assign and transfer until said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States of America, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part and reissue of said application; and the entire right, title and interest in and to said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under the terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEE's expense, to identify and communicate to ASSIGNEE at ASSIGNEE's request documents and information concerning the invention that are within ASSIGNOR's possession or control, and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR's obligations under this instrument shall extend to ASSIGNOR's heirs, executors, administrators and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE's sole use and behoof; and for the use and behoof of ASSIGNEE's legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

☒ See following pages for additional assignors

Full Name of First Assignor	Koji MORIYA	
Residence Address - Street	c/o OSAKA GAS CO., LTD. 1-2, Hiranomachi 4-chome	
City	Chuo-ku, Osaka	
State or Country	Zip	
	Japan	
DATE	SIGNATURE	
June 7, 2002		

## ASSIGNMENT

Page 2

Full Name of 2nd Assignor		Tsutomu WAKABAYASHI	
Residence Address - Street		c/o OSAKA GAS CO., LTD. 1-2, Hiranomachi 4-chome	
City		Chuo-ku, Osaka	
State or Country		Japan	Zip
DATE		June 7, 2002	SIGNATURE 若林 努

Full Name of 3rd Assignor		Takahiro SAKO	
Residence Address - Street		c/o OSAKA GAS CO., LTD. 1-2, Hiranomachi 4-chome	
City		Chuo-ku, Osaka	
State or Country		Japan	Zip
DATE		June 7., 2002	SIGNATURE 佐古 孝弘

Full Name of 4th Assignor		Yuji NAKAMURA	
Residence Address - Street		c/o OSAKA GAS CO., LTD. 1-2, Hiranomachi 4-chome	
City		Chuo-ku, Osaka	
State or Country		Japan	Zip
DATE		June 7, 2002	SIGNATURE 中村 裕司

Full Name of 5th Assignor		Shonosuke KOGA	
Residence Address - Street		c/o OSAKA GAS CO., LTD. 1-2, Hiranomachi 4-chome	
City		Chuo-ku, Osaka	
State or Country		Japan	Zip
DATE		June 7, 2002	SIGNATURE 古賀 祥之助

## ASSIGNMENT

Page 3

Full Name of 6th Assignor	
Masamichi IPPOMMATSU	
Residence Address - Street	
c/o OSAKA GAS CO., LTD. 1-2, Hiranomachi 4-chome	
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Chuo-ku, Osaka	
State or Country	
Japan	
Zip	
DATE	SIGNATURE
June 7, 2002	M. Ippommatsu

Full Name of 7th Assignor	
Seiichi ITO	
Residence Address - Street	
c/o OSAKA GAS CO., LTD. 1-2, Hiranomachi 4-chome	
City	
Chuo-ku, Osaka	
State or Country	
Jaapn	
Zip	
DATE	SIGNATURE
June 7, 2002	Seiichi Ito

Full Name of 8th Assignor	
Residence Address - Street	
City	
State or Country	
Zip	
DATE	SIGNATURE

Full Name of 9th Assignor	
Residence Address - Street	
City	
State or Country	
Zip	
DATE	SIGNATURE

DECEMBER 31, 2002

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Director of the United States Patent and Trademark Office  
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RUSSELL D. ORKIN  
436 SEVENTH AVENUE  
700 KOPPERS BUILDING  
PITTSBURGH, PA 15219-1818



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RECORDATION DATE: 12/20/2002

REEL/FRAME: 013320/0522  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
SUZUKI, KAZUO

DOC DATE: 06/07/2002

ASSIGNOR:  
SHIMODAIRA, KAZUO

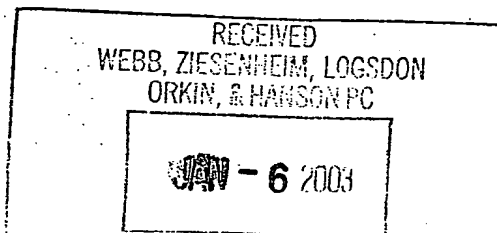
DOC DATE: 06/07/2002

ASSIGNEE:  
OSAKA GAS CO., LTD.  
1-2, HIRANOMACHI 4-CHOME  
CHUO-KU, OSAKA, JAPAN

SERIAL NUMBER: 10149887  
PATENT NUMBER:

FILING DATE: 06/14/2002  
ISSUE DATE:

STEVEN POST, EXAMINER  
ASSIGNMENT DIVISION  
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## 1. Name of conveying party(ies):

Kazuo SUZUKI and Kazuo SHIMODAIRA

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Execution Date: June 7, 2002

## 2. Name and address of receiving party(ies)

Name: OSAKA GAS CO., LTD.

Internal Address: \_\_\_\_\_

Street Address: 1-2, Hiranomachi 4-chome,Chuo-ku, Osaka, Japan

City: \_\_\_\_\_

State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Additional name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application,  
the execution date of the application is: June 7, 2002

## A. Patent Application No.(s):

06/21/2002 SHAJARRO.00000039 10149887

05 FC:581

40.00 OP

## B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Russell D. OrkinInternal Address: Webb Ziesenheim LogsdonOrkin & Hanson, P.C.Street Address: 700 Koppers Building436 Seventh AvenueCity: Pittsburgh State: PA ZIP: 15219-18186. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41) .....\$ 40.00

- ☒ Enclosed with filing fee  
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To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Blynn L. Shideler

Name of Person Signing

Reg. No. 35,034

By [Signature]  
SignatureJune 14, 2002

Date

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V52  
ASSIGNMENTWHEREAS, Kazuo SUZUKI and Kazuo SHIMODAIRA

whose post office addresses appear below (hereinafter (collectively) referred to as ASSIGNOR), has (have) invented certain new and useful improvements in an

FLUID DISTRIBUTOR; BURNER APPARATUS, GAS TURBINE ENGINE  
AND CO-GENERATION SYSTEM (TITLE OF INVENTION)

(hereinafter referred to as THE INVENTION) for which an application for United States Letters Patent was filed on \_\_\_\_\_, Serial Number \_\_\_\_\_;

WHEREAS, OSAKA GAS CO., LTD.

whose post office address is 1-2, Hiranomachi 4-chome, Chuo-ku, Osaka, Japan

(and)

whose post office address is \_\_\_\_\_  
(hereinafter (collectively) referred to as ASSIGNEE), is desirous of acquiring the entire right, title and interest in and to the same in the United States and throughout the world;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, we, ASSIGNOR, by these presents do sell, assign and transfer until said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States of America, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part and reissue of said application; and the entire right, title and interest in and to said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under the terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEE'S expense, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control, and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

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☒ See following pages for additional assignors

Full Name of First Assignor	Kazuo SUZUKI
Residence Address - Street	c/o National Aerospace Laboratory, Science and Technology Agency, 44-1, Jindaiji Higashimachi 7-chome,
City	Chofu-shi, Tokyo
State or Country	Japan
Zip	
DATE	June 7, 2002
SIGNATURE	鈴木 和 雄

## ASSIGNMENT

Page 2

V5(2)

<i>Full Name of 2nd Assignor</i>	
Kazuo SHIMODAIRA	
<i>Residence Address - Street</i>	
c/o National Aerospace Laboratory, Science and Technology Agency, 44-1, Jindaiji Higashimachi 7-chome,	
<i>City</i>	
Chofu-shi, Tokyo	
<i>State or Country</i>	<i>Zip</i>
Japan	
<i>DATE</i>	<i>SIGNATURE</i>
June 7, 2002	下平 一雄

<i>Full Name of 3rd Assignor</i>	
<i>Residence Address - Street</i>	
<i>City</i>	
<i>State or Country</i>	<i>Zip</i>
<i>DATE</i>	<i>SIGNATURE</i>

<i>Full Name of 4th Assignor</i>	
<i>Residence Address - Street</i>	
<i>City</i>	
<i>State or Country</i>	<i>Zip</i>
<i>DATE</i>	<i>SIGNATURE</i>

<i>Full Name of 5th Assignor</i>	
<i>Residence Address - Street</i>	
<i>City</i>	
<i>State or Country</i>	<i>Zip</i>
<i>DATE</i>	<i>SIGNATURE</i>